



# FORESTRY, FIRE & STATE LANDS REQUEST FOR PROPOSALS Cover Sheet



<b>Project Title</b>	Submarine groundwater discharge to Great Salt Lake: Significance to lake monitoring strategies, lake levels, and contaminant loadings		
<b>Lead Project Sponsor</b>	U.S. Geological Survey		
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<b>Project Description / Abstract</b>	<p>Excellent networks have been established to monitor lake-level fluctuations and surface-water inflow and quality to Great Salt Lake (GSL). Historically, these monitoring data have been used by citizens, private consultants, academic institutions, and state and federal agencies for a variety of outreach, management, and research purposes. Despite these excellent monitoring networks, no similar network exists for monitoring the amount, chemical quality, or source(s) of groundwater discharge to GSL. A potential area of groundwater discharge to GSL was recently identified by the USGS (Naftz and others, 2009) and is in close proximity to a selenium contaminant plume associated with an abandoned metal smelting site. This plume contains selenium concentrations <math>&gt;10,000 \mu\text{g/L}</math> and could represent an unmeasured and significant contaminant loading source to GSL. Failure to quantify and monitor the amount, source, and chemical quality of groundwater discharge to all areas of GSL will result in an incomplete understanding of how surface-water diversions, subsurface contaminant plumes, and groundwater development will ultimately impact the lake's water balance and water quality, resulting in ineffective and (or) misguided regulatory decisions. The proposed project will utilize a variety of geophysical (resistivity and temperature surveys), hydrologic (seepage meters, manometers, and piezometers), and geochemical tools (trace constituents, noble gases, and various environmental tracers) to measure the location, amount, source(s), age(s), and chemical quality of groundwater discharge to GSL. In addition, the proposed work will establish the foundations for a groundwater monitoring network in GSL.</p>		
<b>Project Funding</b>	Amount Requested	Matching Funds (cash)	Total Project Cost
	\$ 48,550	\$ 42,370	\$ 90,920